

WHAT IS CLAIMED:

1. A film comprising an ink jet printed microporous material comprising (a) an extruded film layer and (b) a coating layer coated on a surface of said extruded film layer (a), wherein said extruded film layer (a) is biaxially stretched and porous, wherein said extruded film layer (a) comprises high density polyethylene (HDPE) and particles of an incompatible material, wherein said extruded film layer (a) has a meshed network of HDPE fibers and striations of layers coplanar with the plane of the film, wherein said extruded film layer (a) is porous in a direction perpendicular to the plane of the film, wherein said extruded film layer (a) has a void content of at least about 20%, and wherein said coating layer (b) is a porous ink receiving layer with interconnecting voids.
2. A film according to claim 1, wherein said incompatible material is calcium carbonate.
3. A film according to claim 1 which is laminated to a paper or plastic substrate.
4. A film according to claim 1 which is porous from one surface to the other in a direction perpendicular to the plane of the film.
5. A film according to claim 1, wherein said extruded film layer (a) is treated with plasma at a temperature below the melting point of said HDPE.
6. A film according to claim 1, wherein said extruded film layer (a) is coextruded with two other film layers, so as to form a three-layer film structure comprising said extruded layer (a), a core layer (c) and a skin layer (d), said extruded layer (a) and said skin layer (d) being on opposite sides of said core layer (c), wherein said core layer comprises high density polyethylene (HDPE) and particles of an incompatible material, wherein said core layer (c) has a meshed network of HDPE fibers and striations of layers coplanar with the plane of the film, wherein said core layer (c) is porous in a direction perpendicular to the plane of the film and wherein said core layer (c) has a void content of at least about 20%.

7. A film according to claim 6, wherein said skin layer (d) is a nonporous layer.

8. A film according to claim 1, wherein said coating layer (b) comprises particles of silica and alumina and a binder of polyvinyl alcohol or gelatin.

9. A method for producing an ink jet printed microporous material, said method comprising applying ink jet printing ink from an ink jet printer upon at least one surface of a coated microporous material, wherein said coated microporous material comprises (a) an extruded film layer and (b) a coating layer coated on a surface of said extruded film layer (a), wherein said extruded film layer (a) is biaxially stretched and porous, wherein said extruded film layer (a) comprises high density polyethylene (HDPE) and particles of an incompatible material, wherein said extruded film layer (a) has a meshed network of HDPE fibers and striations of layers coplanar with the plane of the film, wherein said extruded film layer (a) is porous in a direction perpendicular to the plane of the film, wherein said extruded film layer (a) has a void content of at least about 20%, and wherein said coating layer (b) is a porous ink receiving layer with interconnecting voids.

10. A method according to claim 9, wherein said ink jet printing ink is a water based ink jet printing ink.